injecting tyrosine phosphorylated proteins [into] proximal to lymph nodes of a mammal,

harvesting lymph node cells from the mammal,

fusing the lymph node cells with myeloma cells to form hybridomas,

selecting at least one hybridoma producing an antibody which specifically binds to an extracellular epitope of EphA2, and

isolating said antibody.

20. (Amended) A pharmaceutical composition for treatment of a mammalian metastatic tumor, said composition comprising a compound that interferes with EphA2 function [in an amount effective] to reduce metastatic proliferation of said tumor, and a pharmaceutically acceptable carrier [therefor].

Please add the following new claims:

24. A pharmaceutical composition for treatment of a mammalian metastatic tumor including a population of cells which overexpress tyrosine kinase EphA2 having an amino acid sequence defining at least one extracellular epitope, said composition comprising a compound that specifically interacts with the extracellular epitope of EphA2 to reduce metastatic invasion or proliferation of said tumor, and a pharmaceutically acceptable carrier.

25. The composition of claim 24 wherein the compound comprises an antibody.

26. The composition of claim 25 wherein the antibody is produced by hybridoma cell line B2D6.

27. The composition of claim 25 wherein the antibody is conjugated to a cytotoxic agent.

28. The compound of claim 27 wherein the cytotoxic agent is selected from the group consisting of a bacterial toxin, ricinA-chain, daunorubicin, methotrexate, a ribosome inhibitor, and a radioisotope.

29. The compound of claim 28 wherein the cytotoxic agent is a radioisotope selected from the group consisting of an alpha emitter, a beta emitter, and an Auger electron emitter.

30. A pharmaceutical composition for treatment of a mammalian metastatic cancer, the composition comprising a compound having at least one biological activity selected from the group consisting of an ability to specifically bind to EphA2, an ability to alter the expression of EphA2, and an ability to stimulate EphA2, said biological activity associated with a reduction in invasiveness, metastatic proliferation, or both of the metastatic cancer; and a pharmaceutically acceptable carrier.

31. The pharmaceutical composition of claim 30 wherein the compound comprises an antibody or an ephrin.

32. An antibody which specifically binds to an extracellular epitope of EphA2.

33. The antibody of claim 32 which is a monoclonal antibody.

34. The antibody of claim 32 bound to a detectable label.

35. The antibody of claim 32 that is produced by hybridoma cell line B2D6.

36. The antibody of claim 32 which is a humanized antibody.

37. An isolated antibody which specifically binds to an extracellular epitope of EphA2.

38. A compound comprising an antibody that specifically binds to an epitope of extracellular EphA2; and a cytotoxic agent.

39. The compound of claim 38 wherein the antibody is produced by hybridoma cell line B2D6.

40. The compound of claim 38 wherein the cytotoxic agent is selected from the group consisting of a bacterial toxin, ricinA-chain, daunorubicin, methotrexate, a ribosome inhibitor, and a radioisotope.

41. The compound of claim 38 wherein the cytotoxic agent is a radioisotope selected from the group consisting of an alpha emitter, a beta emitter, and an Auger electron emitter.

42. Hybridoma cell line B2D6.

43. Isolated hybridoma cell line B2D6.

44. A monoclonal antibody produced by hybridoma cell line B2D6.

45. An isolated monoclonal antibody produced by hybridoma cell line B2D6.

46. A method of treatment of a patient having a metastatic or potentially metastatic cancer comprising a population of cells that overexpress EphA2, said method comprising administering a therapeutically effective amount of a compound that targets EphA2.

47. The method of claim 46 wherein the compound comprises an antibody having specificity for EphA2.

48. The method of claim 47 wherein the antibody has specificity for an extracellular epitope of EphA2.

49. The method of claim 47 wherein the antibody selectively binds to metastatic cells.

50. The method of claim 47 wherein the antibody is produced from hybridoma cell line B2D6.

51. The method of claim 46 wherein administration of the compound prevents or slows metastasis of potentially metastatic cancer cells.

52. The method of claim 46 wherein administration of the compound reduces or prevents proliferation of metastatic cancer cells.

53. The method of claim 46 wherein administration of the compound reduces or prevents tissue invasion by metastatic cancer cells.

54. The method of claim 46 wherein the population of cells comprises cells selected from the group consisting of breast cancer cells, prostate cancer cells, lung cancer cells and colon cancer cells.

55. The method of claim 46 wherein the compound comprises an antisense oligonucleotide that affects EphA2 expression.

56. The method of claim 46 wherein the cells that overexpress EphA2 are epithelial cells.

57. A method for identifying an EphA2 antibody that is selective for EphA2 in metastatic cancer cells, the method comprising: